

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
22 April 2004 (22.04.2004)

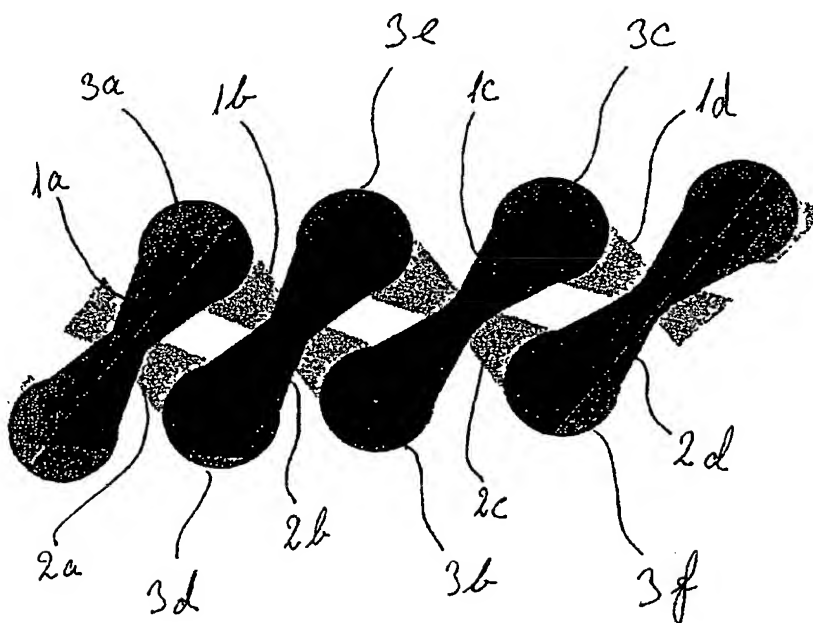
PCT

(10) International Publication Number  
**WO 2004/034756 A3**

- (51) International Patent Classification<sup>7</sup>: **H05K 1/02**
- (21) International Application Number:  
PCT/DK2003/000630
- (22) International Filing Date:  
25 September 2003 (25.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
PA 2002 01512 8 October 2002 (08.10.2002) DK
- (71) Applicant (for all designated States except US): **OTICON A/S** [DK/DK]; Strandvejen 58, DK-2900 Hellerup (DK).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MEHR, Ulrik** [DK/DK]; C/O Oticon A/S, Strandvejen 58, DK-2900 Hellerup (DK). **JOHANSEN, Jesper, B.** [DK/DK]; C/O Oticon A/S, Strandvejen 58, DK-2900 Hellerup (DK).
- (74) Agent: **POULSEN, Henning, Knak**; Oticon A/S, Strandvejen 58, DK-2900 Hellerup (DK).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report

[Continued on next page]

(54) Title: LAYERED STRUCTURE WITH ELECTRIC LEADS FOR A BODY WORN DEVICE



(57) Abstract: Layered structure for a head worn device, wherein electric signals are fed along metallic leads, which are adhered to a layer on or within the layered structure and where a first and a second lead for connecting a first and a second terminal of a component are provided and whereby the two leads are passed side by side and alternating on the two sides of the layer, and in such a manner that the first and second lead will cross one another at an angle but passing on each their side of the print layer.

BEST AVAILABLE COPY

WO 2004/034756 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(88) Date of publication of the international search report:  
27 May 2004

BEST AVAILABLE COPY

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/DK 03/00630

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H05K1/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H05K H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/035529 A1 (BERTIN CLAUDE LOUIS ET AL) 1 November 2001 (2001-11-01) paragraph [0008] - paragraph [0010] paragraph [0029] - paragraph [0033] paragraph [0044] - paragraph [0055] ----	1-4
X	US 6 396 000 B1 (BAUM AARON M) 28 May 2002 (2002-05-28) column 1, line 59 -column 6, line 33 -----	1-4

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

19 March 2004

Date of mailing of the international search report

06. 04. 2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

FREDRIK WAHLIN/MN

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/DK 03/00630

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2001035529	A1	01-11-2001	US 6300687 B1	09-10-2001
			US 2001039074 A1	08-11-2001
US 6396000	B1	28-05-2002	GB 2369727 A	05-06-2002
			JP 2002134852 A	10-05-2002

BEST AVAILABLE COPY